

# EXHIBIT A

**United States Patent** [19]

Greenspan et al.

[11] **Patent Number:** 5,063,062[45] **Date of Patent:** Nov. 5, 1991[54] **CLEANING COMPOSITIONS WITH ORANGE OIL**[75] **Inventors:** Douglas H. Greenspan, Louisville; Phillip A. Low, Littleton, both of Colo.[73] **Assignees:** D. Greenspan; W. Ingram, both of Louisville, Calif.[21] **Appl. No.:** 413,395[22] **Filed:** Sep. 27, 1989[51] **Int. Cl.:** ..... A61F 13/00[52] **U.S. Cl.:** ..... 424/443; 424/195.1; 424/401; 252/142; 514/783; 514/846[58] **Field of Search** ..... 424/443, 401; 514/783[56] **References Cited****U.S. PATENT DOCUMENTS**

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*Primary Examiner*—Thurman K. Page*Assistant Examiner*—James M. Spear*Attorney, Agent, or Firm*—Timothy J. Martin[57] **ABSTRACT**

A cleaning composition for cleaning the skin contains orange oil, a pharmaceutically acceptable moisturizer and an emulsifying agent. Preferably the orange oil accounts for between 5% and 60% by volume, and it further preferred that the composition contains 40% orange oil by volume. The moisturizer is either glycerin, aloe vera, jojoba oil, safflower oil or a combination thereof. The emulsifying agent preferably is oatmeal. The composition is constituted to have a pH of between 4.5 and 6.0, and the composition may be packaged as moistened towlelets in hermetic packets.

**12 Claims, No Drawings**

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**CLEANING COMPOSITIONS WITH ORANGE OIL****FIELD OF THE INVENTION**

The present invention generally relates to cleaning compositions suitable for external application to human skin tissue in order to remove unwanted substances such as tar, caulking compounds, sealants, adhesives and the like. More specifically, however, the present invention is directed to a natural cleaning composition that utilizes only plant based ingredients. As such, the present invention is particularly adapted for cleaning non-water soluble products from the human skin in a safe, effective manner.

**BACKGROUND OF THE INVENTION**

A wide variety of cleaning compositions are known for external application to skin tissue in order to remove dirt and unwanted materials. Among these cleaning compounds are the various hard and liquid soaps which may be used for cleaning human skin, especially the hands. However, numerous substances with which the hands may be soiled do not respond to ordinary soap compositions. Examples of substances that are difficult to remove include grease, tar, oils, ink, caulking materials, adhesives, sealants, gums, cosmetics and other non-water soluble products.

While some cleaning compositions have been developed for these materials, the typical cleaners are harsh and can damage the skin, especially after prolonged use. Examples of these compounds include turpentine, acetone, toluene and other petroleum based products as well as ammonia based products. These products, though, often damage the skin and otherwise exhibit a high level of toxicity. Further, if inhaled during use, these petroleum based products may cause respiratory damage. When absorbed through the skin, the petroleum based products can cause damage to the major organs of the body and can have a less serious side effect of drying and chaffing the skin where applied. Thus, it should be appreciated that, although petroleum is a naturally occurring product, it is not toxilogically healthy for the human body. Accordingly, there have been substantial efforts which have been made to find suitable alternative substances for skin cleaning. While some synthetically derived substances have been developed, many of these substances are medically suspect, and in some instances produce side effects making them unsuitable for use on a regular basis.

Orange oil, as a natural product derived from the rind of oranges, has been recognized in the past to have some cleaning capabilities. Prior to the present invention, however, it is not believed that the suitability of orange oil in cleaning human skin was realized. Orange oil by itself is a skin irritant that can cause inflammation of the tissues. When used by itself, fumes from orange oil may cause headaches, dizziness and other side effects. Accordingly, it has not been readily apparent that orange oil alone or in combination with other substances could prove effective in cleaning compounds otherwise difficult to remove from the tissues of the skin. Rather, efforts in the past have been directed to the combination of orange oil with other cleaning solvents to produce floor cleaners, glass cleaners and the like.

From the foregoing, it should be appreciated that the thrust of prior development of skin cleaners, other than soap, have been directed to petroleum based products and ammonia based products and the industry has ig-

nored the potential for orange oil as a constituent of skin cleaning compounds. Despite the long felt need for better cleaners, the suitability of orange oil has thus not been recognized, and the inventors of the subject invention have found success by examining this substance contrary to the direction of inquiry adopted by the industry at large.

**SUMMARY OF THE INVENTION**

It is an object of the present invention to provide a new and useful compound for cleaning the human skin.

Another object of the present invention is to provide a skin cleaning compound suitable for cleaning non-water soluble products such as grease, caulking, adhesives, sealants, tar, oils, ink and the like.

Yet another object of the present invention is to provide a skin cleaning composition which is non-toxic.

It is a further object of the present invention is to provide a skin cleaning composition that is derived from natural vegetable and plant sources.

Still a further object of the present invention is to provide a skin cleaning composition that not only removes unwanted substances from the human skin but also acts to help clean and revitalize the human skin.

The present invention, then, provides a skin cleaning composition which is adapted for external use on human tissues. Broadly, this composition comprises a first ingredient being between five percent (5%) and sixty percent (60%) by volume of orange oil, a second ingredient being a pharmaceutically acceptable moisturizer for human skin and a third ingredient being an emulsifying agent. Preferably, the moisturizer is selected from a group consisting of: glycerin, aloe vera, jojoba oil, and safflower oil. Further, it is preferred that the emulsifying agent also function as an emollient. Preferably the emulsifying agent is a natural grain derivative, preferably either oat gum or oatmeal. Further, it is preferred that the first, second, and third ingredients are selected and mixed in a ratio such that the resulting skin cleaning composition has a pH range of between 4.5 and 6.0 inclusively. To this end, a fourth ingredient in the form of a buffering compound may be added to the composition.

In the more specific composition according to the preferred embodiment, the cleaning composition comprises forty-five percent (45%) or less by volume of orange oil, forty-five percent (45%) or less by volume of the emulsifying agent and the pharmaceutically acceptable moisturizer. The preferred emulsifying agent in this composition is oatmeal, and the preferred moisturizer is a mixture of jojoba oil, aloe vera and glycerin mixed by volume of approximately two parts jojoba oil, two parts aloe vera and one part glycerin. It is further desired to use a small portion of safflower oil both as a moisturizer and to help form a stable emulsion.

These and other objects of the present invention will become more readily appreciated and understood from a consideration of the following detailed description of the preferred embodiment:

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

The present invention is directed to a cleaning composition utilized on skin tissues and having, as its cleaning ingredient, the commercially available substance known as orange oil derived from the rinds of oranges. In this broad form, the composition includes orange oil,

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an emulsifying agent and a pharmaceutically acceptable moisturizer. In order to determine the preferred composition of the present invention, a series of samples having differing properties were evaluated to establish a desired range in pH and to establish the necessary proportion of orange oil to give suitable cleaning. These test samples are set forth below.

In their investigation of cleaning compositions according to the present invention, Applicants first investigated several compositions which were mixtures of orange oil, water, moisturizers and vitamin E. These samples were developed to test the cleaning properties of orange oil and to evaluate orange oil mixed with moisturizing agents. A test group of ten persons, male and female, were selected to subjectively evaluate the results of these samples. Initially, three such samples were prepared, and the compositions are set forth as Samples I-III, as follows:

SAMPLE I

Ingredient	Volume Percent (Approximate)
Orange Oil	39
Water	33
Glycerin*	12
Aloe Vera*	12
Jobaba Oil*	3
Vitamin E	1

\*Total Moisturizers accounted for approximately 27% by volume.

SAMPLE II

Ingredient	Volume Percent (Approximate)
Orange Oil	34.5
Water	27.5
Glycerin*	17
Aloe Vera*	14
Jobaba Oil*	3.5
Vitamin E	3.5

\*Total Moisturizers accounted for approximately 34.5% by volume.

SAMPLE III

Ingredient	Volume Percent (Approximate)
Orange Oil	37
Water	26
Glycerin*	14.75
Aloe Vera*	14.75
Jobaba Oil*	3.5
Vitamin E	4

\*Total Moisturizers accounted for approximately 33% by volume.

Prior to presenting these samples to the test group, Applicants tested the relative acidity of the samples since it was believed desirable to avoid a composition that was either too acidic or too basic. The result of this acidity measurement, correlated to the Samples, is set forth in Table I below:

TABLE I

Sample	pH (Approximate)
I	4.5
II	5
III	4.7

In each of the cases of Samples I-III, the respective components were mixed and blended in an attempt to form an emulsion. An initial problem was noted with each of these Samples, however, in that the emulsion separated, that is, "broke" after approximately one to

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two days. Since it was fairly simple to re-blend the Samples, Samples I-III were submitted to the test group for evaluation. Generally, the results of the composition was excellent with each of Samples I-III readily removing polyurethane and silicone base caulking compounds, tars, grease, oil and adhesives; each of these industrial type substances are regarded as difficult to remove, from the human hands. All ten members of the test group reported comparable cleaning properties and reported that their hands were left soft after a two week period of using the compounds. Indeed, after two weeks of use, certain male members of the test group who had dry hands resulting from the use of other solvents noted substantial improvement in the texture and softness of their hands. No allergic reactions were reported by any members of the test group.

After determining that test Samples I-III performed adequately in cleaning the hands and in moisturizing the hands, it became necessary to determine whether the oil orange and moisturizer emulsion could be stabilized so that it would not break over a period of time. In order to determine if a natural ingredient could act as an emulsifying agent, the Applicants selected a grain base derivative as an emulsifying agent. To this end, Applicants tested oatmeal gum and oatmeal to act as the primary emulsifier. Accordingly, two more test samples, Samples IV and V were prepared according to the compositions set forth below:

SAMPLE IV

Ingredient	Volume Percent (Approximate)
Orange Oil	42.75
Aloe Vera*	7
Jobaba Oil*	3.5
Safflower Oil*	4
Oatmeal Gum	42.75

\*Total Moisturizers accounted for approximately 14.5% by volume.

SAMPLE V

Ingredient	Volume Percent (Approximate)
Orange Oil	36.5
Aloe Vera	14
Jobaba Oil*	14
Glycerin*	7
Safflower Oil*	0.5
Oatmeal	28

\*Total Moisturizers accounted for approximately 35.5% by volume.

It may be noted that, in Samples IV and V, vitamin E and water were both omitted from the composition. However, it should be noted that both the oatmeal gum in Sample IV and the oatmeal in Sample V each contain a portion of water. In Sample IV, the oatmeal gum was prepared by boiling rolled oats in water and straining the resultant mass to remove the hulls. In Sample V, rolled oats were boiled in water and the resulting mass (containing approximately 50% water) was used to prepare the composition. Relatively equal parts of orange oil and oat derivatives were used and a small portion of safflower oil was included. Again, relative acidity was tested and it was found that Sample IV had a pH of approximately 5.0 while Sample V had a pH of 5.5.

Samples IV and V were submitted to the test group to evaluate cleaning effectiveness and moisturizing ability. Further, observation of the two compositions were

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made to determine whether or not the emulsions broke. The results of this study determined that the emulsion of Sample IV broke after approximately seven days while the emulsion according to Sample V did not separate over any observed duration of time (several months). The test group observed that the cleaning properties of Samples IV and V were almost, but not quite, as effective as the cleaning properties of Samples I-III, but that the cleaning effectiveness was estimated at approximately 90% of Samples I-III. With respect to Sample IV, the test group reported that their hands did not roughen, but that the sample did not feel as comfortable when on the hands. With respect to Sample V, the test group reported that the emulsion both felt comfortable on the hands and left their hands soft after approximately five days of regular usage. In each case, the emulsions were able to clean all caulking materials and tars, including silicone and polyurethane based caulking compounds as well as oil and grease from the skin. Further tests were conducted on compositions similar to Sample V where in the amount of orange oil was slightly increased while holding the amounts of the remaining ingredients constant until the emulsion broke. It was found that, with these compositions, the emulsion broke when orange oil accounted for approximately 38% by volume of the composition.

From the foregoing, Applicants determined that Sample V offered the best compromise among emulsion stability, cleaning effectiveness, and skin effect. Therefore, utilizing Sample V as a reference, Applicants adjusted the amount of orange oil (ignoring whether the emulsion broke) to determine an effective pH range wherein the composition felt comfortable on the human hands. A first set of samples set forth below as Samples VI-IX were prepared to be less acidic than Sample V, and a second set of test samples, set forth below as Samples X-XIII were tested for compositions having greater acidity than Sample V. Samples VI-IX were prepared by simply buffering Sample V with differing amounts of sodium bicarbonate. The resulting samples were buffered to have pH values according to Table 2 as follows:

TABLE 2

Sample	pH (Approximate)
VI	9.0
VII	8.0
VIII	7.0
IX	6.0

Each of Samples VI-IX were evaluated by the test group. Samples VI and VII were reported to immediately make the hands dry upon first application of the respective composition and removal of the composition with water. With respect to Samples VIII and IX, the test group reported less drying than Samples VI and VII although more dryness of the hands was noted in comparison to test Sample V. These empirical observations lead Applicants to conclude that an acidity of at least pH 6.0 is desirable, that is, that the preferred composition should not be more basic than pH 6.0.

To evaluate test compositions for excess acidity, Applicants merely increased the amount of orange oil in test Sample V while holding the amounts of the remaining ingredients constant to obtain desired acidity levels according to Table 3, below:

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TABLE 3

Sample	pH (Approximately)
X	2.5
XI	3.0
XII	3.5
XIII	4.0

Test Sample X had a volume percent of approximately 80% orange oil, Sample IX had orange oil of approximately 70% by volume, Sample XII had orange oil of approximately 60% by volume, and Sample XIII had orange oil of approximately 50% by volume.

It had previously been found that orange oil alone exhibited excellent cleaning properties, but left the hands feeling too dry and too astringent. With respect to Samples X-XIII, in each case no emulsion formed. The test group reported that each of Samples X-XIII had excellent cleaning properties, but the emulsions felt too astringent on the hands even after limited use. Applicants accordingly concluded that it was desirable that the emulsified composition have a pH that is approximately 4.5. Thus, Applicants further concluded that the composition according to the preferred embodiment of the present invention should have a pH of between 4.5 and 6.0, inclusively.

As noted in the above examples, the emulsions according to Sample V broke at approximately 38% orange oil by volume. In order to evaluate cleaning properties as a function of percent volume of orange oil, additional samples were prepared wherein the weight percentages of the ingredients other than orange oil was held constant while the amount of orange oil was varied to provide differing volume percentages of orange oil. Accordingly, Samples XIV-XVII were prepared to have volume percents of orange oil approximately 5%, 10%, 15% and 25%, respectively. In each case, the emulsions were stable. These Samples XIV-XVII were given to the test group to subjectively evaluate cleaning effectiveness. With respect to Sample XIV, the test group reported that cleaning properties were substantially reduced; Sample XIV could not effectively clean tar or caulking compounds. Indeed, Sample XIV was only effective in removing cosmetics from the skin. Sample XV eventually was able to remove silicone caulking compounds but was unable to remove polyurethane caulking or tar. With respect to Sample XVI, the test group reported about 50%-60% of the cleaning effectiveness of Sample V with no marked increase in benefits in skin softening. Sample XVII was reported to have approximately 80% of the cleaning effectiveness of Sample V in removing all of the tested materials, but again there was no report of skin enhancements over Sample V.

From these tests, Applicants concluded that, with respect to cosmetics, a composition according to the present invention could have as little as 5% by volume of orange oil although it was preferable to have a cleaning composition having at least 25% by volume of orange oil.

To determine whether the moisturizers had any effect on the composition or whether pH was the dominant skin effecting property, Applicants prepared yet another sample, Sample XVIII, wherein 100% orange oil was buffered with sodium bicarbonate so that it had a pH of 5.5. This Sample XVIII was tested and it was determined that it was exceptionally drying and astringent.



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gent on the human hands. Indeed, Sample XVIII proved almost as drying and astringent as Sample X.

In order to increase the amount of orange oil, Applicants further tested a variation on Sample V wherein both the amount of orange oil and the amount of oatmeal were increased while the amount of moisturizers was decreased. This Sample XIX, was prepared as follows:

SAMPLE XIX

Ingredient	Volume Percent (Approximate)
Orange Oil	40.5
Aloe Vera*	7.75
Jobba Oil*	7.75
Glycerin*	4.5
Safflower Oil*	.5
Oatmeal	39

\*Total Moisturizers accounted for 30.5% by volume.

From Sample XIX, it was concluded that orange oil could be increased, along with a corresponding increase in an oat grain derivative, until approximately 45% by volume of orange oil was included in the composition. Any amount of orange oil in excess of this amount would result in the diminishment of moisturizers so as to negate the softening effect of the hand cleaning composition according to the preferred invention.

Other samples, set forth below as Samples XX-XXIII were prepared utilizing other materials. These samples are as follows:

SAMPLE XX

Ingredient	Volume Percent (Approximate)
Orange Oil	50
Olive Oil	25
Jobba Oil	25
Baking Soda	Trace

SAMPLE XXI

Ingredient	Volume Percent (Approximate)
Orange Oil	50
Glycerin	50

SAMPLE XXII

Ingredient	Volume Percent (Approximate)
Orange Oil	50
Aloe Vera	50

SAMPLE XXIII

Ingredient	Volume Percent (Approximate)
Orange Oil	12.5
Vitamin E	87.5

Sample XX was found to have a pH of approximately 8.5. While Sample XX was deemed effective in cleaning, there was some reduction of cleaning effectiveness over Sample V and the composition left a dryness when wiped off of the skin. Further, the emulsion broke almost immediately. With respect to Samples XXI and XXII, both samples left a sticky residue on the hands but were approximately equal in cleaning effectiveness to Sample V. Sample XXI had a pH a little greater than 2.0 while Sample XXII had a pH of approximately 3.5.

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It was thus observed that aloe vera had some buffering effect on the acidity of the orange oil. Each of Samples XXI and XXII were highly astringent and left the test groups hands dry after washing with water. With respect to Sample XXIII, again this sample proved effective in removing cosmetics, but the sample was not effect in removing heavier, industrial substances such as caulking compounds, adhesives, tars and the like. The orange oil and Vitamin E, however, did mix without separation and a resulting acidity of pH 5.0.

From the information derived from all of the aforementioned samples, Applicants determined that glycerin and safflower oil are both desirable in the preferred compositions. On one hand glycerin appears both to stabilize the emulsion and perform as a moisturizer while, on the other hand, safflower oil appears to act as an emulsion stabilizer, as an emulsifying agent and as a moisturizer.

According to the above, Applicants prefer the compositions set forth in Sample V and Sample XIX for use in cleaning unwanted materials from human skin. In order to test administration of the preferred composition, Applicants applied the compound directly to the skin as a liquid emulsion and removed the emulsion from the hands by washing with water. In addition, Applicants were successful in soaking toweltlets, formed of standard absorbent material such as paper, cloth and the like, in the liquid emulsion so that a toweltlet would become impregnated with the cleaning composition. These toweltlets can be hermetically sealed in standard foil packages, as known in the industry, so that the user can simply remove from the skin any of the described unwanted materials with a pre-moistened toweltlet. This is particularly useful in situations where water is not readily available. Further, individualized packets of pre-moistened toweltlets are convenient for portability and on-the-job use.

From the foregoing, the inventors have concluded that a suitable skin cleaning composition can be prepared wherein the skin composition has a first ingredient of between 5% and 60% by volume of orange oil, a second ingredient being a pharmaceutical acceptable moisturizer for human skin and a third ingredient being an emulsifying agent. Preferably, the moisturizer is either one or more of a group of moisturizers selected from the following: glycerin, aloe vera, jojoba oil, safflower oil. However, other pharmaceutically acceptable moisturizers are within the scope of this invention as could be developed without undue experimentation by the ordinarily skilled chemist according to the teachings of the present invention. One example of such a moisturizer is glycerin stearate. These other compositions are thus intended, unless otherwise specifically limited, to be encompassed by the general phrase "moisturizer" both in this specification and in the appended claims. In any event, it is preferred that the resultant composition have a pH between 4.5 to 6.0 and can be so buffered if necessary by the utilization of aloe vera or a buffering agent, such as baking soda.

Accordingly, the present invention has been described with some degree of particularity directed to the preferred embodiment of the present invention. It should be appreciated, though, that the present invention is defined by the following claims construed in light of the prior art so that modifications or changes may be made to the preferred embodiment of the present inven-

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tion without departing from the inventive concepts contained herein.

We claim:

1. A skin cleaning composition adapted for external use on human tissues, comprising a first ingredient being between five percent (5%) and sixty percent (60%) by volume of orange oil, a second ingredient being a pharmaceutically acceptable moisturizer for human skin and a third ingredient being an emulsifying agent in the form of an oat grain derivative product.

2. A skin cleaning composition according to claim 1 wherein said moisturizer is selected from a group consisting of: glycerin, aloe vera, jojoba oil, and safflower oil.

3. A skin cleaning composition according to claim 1 wherein said oat grain derivative product is one of oat gum and oatmeal.

4. A skin cleaning composition according to claim 1 wherein said first, second and third ingredients are selected and mixed in a ratio such that the resulting skin cleaning composition has a pH range of between 4.5 to 6.0, inclusively.

5. A skin cleaning composition according to claim 1 including as a fourth ingredient a buffering compound in a proportion such that the resulting composition is pH balanced within a range of 4.5 to 6.0, inclusively.

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6. A skin cleaning composition for external use on human tissues, comprising orange oil, a pharmaceutically acceptable moisturizer for human skin and an oat grain derivative product as an emulsifying agent, wherein said composition has a pH within a range of 4.5 to 6.0, inclusively.

7. A skin cleaning composition according to claim 5 including a buffering compound.

8. A skin cleaning composition according to claim 5 wherein said moisturizer is selected from a group consisting of: glycerin, aloe vera, jojoba oil, safflower oil and glycerol stearate.

9. A cleaning composition for use on human skin comprising forty-five percent (45%) or less by volume of orange oil, forty-five percent (45%) or less by volume of oatmeal and a pharmaceutically acceptable moisturizer.

10. A cleaning composition according to claim 8 wherein said moisturizer is a mixture of jojoba oil, aloe vera and glycerin.

11. A cleaning composition according to claim 1 wherein said mixture includes by volume two parts jojoba oil, two parts aloe vera and one part glycerin.

12. A cleaning composition according to claim 9 wherein said mixture includes safflower oil.

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# **EXHIBIT B**



**REDACTED**

# **EXHIBIT C**

**REDACTED**

# **EXHIBIT D**

**REDACTED**

# **EXHIBIT E**



**REDACTED**

# **EXHIBIT F**

**REDACTED**

# **EXHIBIT G**

**REDACTED**

# **EXHIBIT H**



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**CTFA**  
***Cosmetic Ingredient***  
***Handbook***

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**REDUCING AGENTS (Cont.)****SKIN CONDITIONING AGENTS - EMOLLIENT**

Finally, reducing agents have the ability to split disulfide bonds in hair and, therefore, find use as *hair waving/straightening agents* and *depilating agents*.

Ammonium Bisulfite  
Ammonium Sulfate  
Ammonium Sulfite  
Ammonium Thioglycolate  
Cysteine  
Cysteine HCl  
Ethanolamine Thioglycolate  
Hydroquinone

Mercaptopropionic Acid  
Potassium Metabisulfite  
Potassium Sulfite  
Potassium Thioglycolate  
Sodium Bisulfite  
Sodium Hydrosulfite  
Sodium Hydroxymethane Sulfonate

Sodium Metabisulfite  
Sodium Sulfite  
Sodium Thioglycolate  
Thioglycerin  
Thioglycolic Acid  
Thiosalicylic Acid  
Zinc Formaldehyde Sulfoxylate

**SKIN BLEACHING AGENTS**

Skin bleaching agents are the active ingredients used in over-the-counter (OTC) skin bleaching drug products. In a proposed rule published by the U.S. Food and Drug Administration, "Skin Bleaching Drug Products for Over-the-Counter Human Use" (47 Fed. Reg. 39108, September 3, 1982), a skin bleaching active ingredient is defined as "an agent designed to bleach or otherwise lighten limited areas of hyperpigmented skin through the suppression of melanin pigment formation within skin cells."

The listing below identifies those ingredients that were included in 47 Fed. Reg. 39108 as safe and effective in skin bleaching drug products and which have also been published in the CTFA Cosmetic Ingredient Dictionary. These ingredients have been reported to have a purely cosmetic purpose in cosmetic formulations, in addition to being safe and effective as active ingredients in drug products. To identify the currently allowed skin bleaching agents, or for information on ingredient use limitations, etc., the reader is directed to contact CTFA or the Food and Drug Administration for the most recent information concerning this drug category.

The names cited below are the established drug names as presented in 47 Fed. Reg. 39108. Whenever CTFA adopted names differ, they are presented parenthetically.

Hydroquinone

**SKIN CONDITIONING AGENTS**

A large number of cosmetic ingredients function as skin conditioning agents. In order to define the specific function performed by these ingredients more precisely, they have been divided into four groups: *skin conditioning agents - emollient*; *skin conditioning agents - humectant*; *skin conditioning agents - miscellaneous*; and *skin conditioning agents - occlusive*.

**SKIN CONDITIONING AGENTS - EMOLLIENT**

Skin conditioning agents - emollient are cosmetic ingredients which help to maintain the soft, smooth, and pliable appearance of skin. Emollients function by their ability to remain on the skin surface or in the stratum corneum to act as lubricants, to reduce flaking, and to improve the skin's appearance. Similar functions are served by *skin conditioning agents - humectant*; *skin conditioning agents - miscellaneous*; and especially *skin conditioning agents - occlusive*.

**SKIN CONDITIONING AGENTS – EMOLLIENT (Cont.)**

Acetyl Trioctyl Citrate	Dihydrophytosteryl Octyldecanoate	Hydrogenated Lard Glyceride
Apricot Kernel Oil PEG-6 Esters	Dihydroxyethyl Soyamine Dioleate	Hydrogenated Lard Glycerides
Arachidyl Propionate	Dihydroxyethyl Tallowamine Oleate	Hydrogenated Palm Glycerides
Avocado Oil	Diisobutyl Adipate	Hydrogenated Palm Kernel Glycerides
Bay Oil	Diisocetyl Adipate	Hydrogenated Palm Oil Glyceride
Behenyl Erucate	Diisodecyl Adipate	Hydrogenated Palm Oil Glycerides
Bisphenylhexamethicone	Diisopropyl Adipate	Hydrogenated Palm/Palm Kernel Oil PEG-6 Esters
Butyl Acetyl Ricinoleate	Diisopropyl Dilinoleate	Hydrogenated Polyisobutene
Butyl Myristate	Diisopropyl Sebacate	Hydrogenated Soybean Oil Glycerides
Butyl Oleate	Diisostearyl Adipate	Hydrogenated Soy Glyceride
Butyl Stearate	Diisostearyl Dilinoleate	Hydrogenated Tallow Glyceride
C18-36 Acid Glycol Ester	Diisostearyl Malate	Hydrogenated Tallow Glyceride Citrate
C12-15 Alcohols Benzoate	Dilauryl Citrate	Hydrogenated Tallow Glyceride Lactate
C12-15 Alcohols Lactate	Dimethicone Copolyol	Hydrogenated Tallow Glycerides
C12-15 Alcohols Octanoate	Dimethiconol	Hydrogenated Tallow Glycerides Citrate
C14-15 Alcohols	Dioctyl Adipate	Hydrogenated Vegetable Glyceride
C15-18 Glycol	Dioctyl Dilinoleate	Hydrogenated Vegetable Glycerides
C18-20 Glycol Isostearate	Dioctyl Sebacate	Hydrogenated Vegetable Glycerides Phosphate
C14-16 Glycol Palmitate	Dioctyl Succinate	Hydroxylated Lanolin
C13-14 Isoparaffin	Dipropylene Glycol Dibenzoate	Hydroxyoctacosanyl Hydroxystearate
C13-16 Isoparaffin	Ditridecyl Adipate	Isoamyl Laurate
C20-40 Isoparaffin	Dodecyltetradecanol	Isobutyl Myristate
C11-15 Pareth-3 Oleate	Ethyl Arachidonate	Isobutyl Palmitate
C11-15 Pareth-3 Stearate	Ethyl Laurate	Isobutyl Pelargonate
C11-15 Pareth-12 Stearate	Ethyl Linoleate	Isobutyl Stearate
C12-15 Pareth-9 Hydrogenated Tallowate	Ethyl Linolenate	Isocetyl Alcohol
C12-15 Pareth-12 Oleate	Ethyl Myristate	Isocetyl Isodecanoate
C30-46 Piscine Oil	Ethyl Palmitate	Isocetyl Palmitate
Caprylic/Capric/Diglyceryl Succinate	Ethyl Pelargonate	Isocetyl Stearate
Caprylic/Capric Glycerides	Ethyl Persate	Isocetyl Stearoyl Stearate
Caprylic/Capric/Isostearic/Adipic Triglycerides	Ethyl Stearate	Isodecyl Hydroxystearate
Cetearyl Alcohol	Fish Glycerides	Isodecyl Isononanoate
Cetearyl Isononanoate	Glyceryl Behenate	Isodecyl Laurate
Cetearyl Octanoate	Glyceryl Caprate	Isodecyl Myristate
Cetearyl Palmitate	Glyceryl Caprylate/Caprate	Isodecyl Neopentanoate
Cetyl Acetate	Glyceryl Cocoate	Isodecyl Oleate
Cetyl Alcohol	Glyceryl Dilaurate	Isodecyl Palmitate
Cetyl arachidol	Glyceryl Dioleate	Isohexyl Laurate
Cetyl Esters	Glyceryl Distearate	Isohexyl Palmitate
Cetyl Lactate	Glyceryl Erucate	Isononyl Isononanoate
Cetyl Myristate	Glyceryl Hydroxystearate	Isopropyl Isostearate
Cetyl Octanoate	Glyceryl Isostearate	Isopropyl Lanolate
Cetyl Palmitate	Glyceryl Lanolate	Isopropyl Laurate
Cetyl Ricinoleate	Glyceryl Laurate	Isopropyl Linoleate
Cetyl Stearate	Glyceryl Linoleate	Isopropyl Methoxycinnamate
Coco-Caprylate/Caprate	Glyceryl Myristate	Isopropyl Myristate
Cocoglycerides	Glyceryl Oleate	Isopropyl Oleate
Coconut Alcohol	Glyceryl Palmitate Lactate	Isopropyl Palmitate
Corn Oil PEG-6 Esters	Glyceryl Ricinoleate	Isopropyl Ricinoleate
Cottonseed Glyceride	Glyceryl Sesquileate	Isopropyl Stearate
Cottonseed Oil	Glyceryl Stearate	Isopropyl Tallowate
Cyclomethicone	Glyceryl Stearate Citrate	Isostearyl Alcohol
Decyl Alcohol	Glyceryl Stearate Lactate	Isostearyl Benzoate
Decyl Isostearate	Glyceryl Triacetyl Hydroxystearate	Isostearyl Isostearate
Decyl Oleate	Glyceryl Triacetyl Ricinoleate	Isostearyl Lactate
Decyl Succinate	Glyceryl Trioctanoate	Isostearyl Neopentanoate
Decyltetradecanol	Glyceryl Triundecanoate	Isostearyl Palmitate
Dibutyl Adipate	Glycol Dioctanoate	Isotridecyl Isononanoate
Dibutyl Sebacate	Glycol Hydroxystearate	Laneth-9 Acetate
Di-C12-15 Alcohols Adipate	Glycol Oleate	Laneth-10 Acetate
Dicapryl Adipate	Glycol Ricinoleate	Lanolin
Dicetyl Adipate	Glycol Stearate	Lanolin Alcohol
Diethylene Glycol Dibenzoate	Heptylundecanol	Lanolin Oil
Diethyl Palmitoyl Aspartate	Hexyl Laurate	Lanolin Wax
Diethyl Sebacate	Hydrogenated Coco-Glycerides	Lard Glycerides
Dihexyl Adipate		
Dihydrocholesteryl Octyldecanoate		

## SKIN CONDITIONING AGENTS – EMOLLIENT (Cont.)

## SKIN CONDITIONING AGENTS – HUMECTANT

Laureth-2 Benzoate  
 Lauryl Alcohol  
 Lauryl Glycol  
 Lauryl Isostearate  
 Lauryl Lactate  
 Lauryl Myristate  
 Lauryl Palmitate  
 Methyl Acetyl Ricinoleate  
 Methyl Caproate  
 Methyl Caprylate  
 Methyl Caprylate/Caprates  
 Methyl Cocoate  
 Methyl Dehydroabietate  
 Methyl Glucose Sesquileate  
 Methyl Glucose Sesquisteate  
 Methyl Hydrogenated Rosinate  
 Methyl Hydroxystearate  
 Methyl Laurate  
 Methyl Linoleate  
 Methyl Myristate  
 Methyl Oleate  
 Methyl Palmitate  
 Methyl Pelargonate  
 Methyl Ricinoleate  
 Methyl Rosinate  
 Methyl Stearate  
 Mineral Oil  
 Mink Oil  
 Myreth-3 Caprate  
 Myreth-3 Laurate  
 Myreth-3 Myristate  
 Myreth-3 Palmitate  
 Myristyl Alcohol  
 \*\*Myristylalcohol  
 Myristylalcohol Stearate  
 Myristyl Isostearate  
 Myristyl Lactate  
 Myristyl Lignocerate  
 Myristyl Myristate  
 Myristyl Neopentanoate  
 Myristyloctadecanoate  
 Myristyl Propionate  
 Myristyl Stearate  
 Neopentyl Glycol Dicaprate  
 Neopentyl Glycol Dioctanoate  
 Nonyl Acetate  
 Octyl Acetoxystearate  
 Octyldodecanol  
 Octyldodecyl Neodecanoate  
 Octyl Hydroxystearate  
 Octyl Isononanoate

Octyl Myristate  
 Octyl Palmitate  
 Octyl Pelargonate  
 Octyl Stearate  
 Oleyl Acetate  
 Oleyl Alcohol  
 Oleyl Arachidate  
 Oleyl Erucate  
 Oleyl Lanolate  
 Oleyl Myristate  
 Oleyl Oleate  
 Oleyl Stearate  
 Palm Kernel Alcohol  
 Palm Kernel Glycerides  
 Palm Oil Glycerides  
 PEG-6 Caprylic/Capric Glycerides  
 PEG-2 Castor Oil  
 PEG-3 Castor Oil  
 PEG-4 Castor Oil  
 PEG-5 Castor Oil  
 PEG-8 Castor Oil  
 PEG-9 Castor Oil  
 PEG-10 Castor Oil  
 PEG-10 Coconut Oil Esters  
 PEG-5 Glyceryl Triisostearate  
 PEG-5 Hydrogenated Castor Oil  
 PEG-7 Hydrogenated Castor Oil  
 PEG-5 Hydrogenated Corn Glycerides  
 PEG-8 Hydrogenated Fish Glycerides  
 PEG-20 Methyl Glucose Sesquisteate  
 Pentaerythrityl Rosinate  
 Pentaerythrityl Tetraoctanoate  
 Pentaerythrityl Tetraoleate  
 PPG-4-Ceteth-1  
 PPG-8-Ceteth-1  
 PPG-8-Ceteth-2  
 PPG-10 Cetyl Ether  
 PPG-10 Cetyl Ether Phosphate  
 PPG-28 Cetyl Ether  
 PPG-30 Cetyl Ether  
 PPG-50 Cetyl Ether  
 PPG-17 Dioleate  
 PPG-3 Hydrogenated Castor Oil  
 PPG-30 Isocetyl Ether  
 PPG-5 Lanolate  
 PPG-2 Lanolin Alcohol Ether  
 PPG-5 Lanolin Alcohol Ether  
 PPG-10 Lanolin Alcohol Ether  
 PPG-20 Lanolin Alcohol Ether  
 PPG-30 Lanolin Alcohol Ether  
 PPG-5 Lanolin Wax

PPG-5 Lanolin Wax Glyceride  
 PPG-9 Laurate  
 PPG-4 Lauryl Ether  
 PPG-3 Myristyl Ether  
 PPG-4 Myristyl Ether  
 PPG-26 Oleate  
 PPG-36 Oleate  
 PPG-10 Oleyl Ether  
 PPG-20 Oleyl Ether  
 PPG-23 Oleyl Ether  
 PPG-30 Oleyl Ether  
 PPG-37 Oleyl Ether  
 PPG-50 Oleyl Ether  
 PPG-9-Steareth-3  
 PPG-11 Stearyl Ether  
 PPG-15 Stearyl Ether  
 Propylene Glycol Isostearate  
 Propylene Glycol Hydroxystearate  
 Propylene Glycol Laurate  
 Propylene Glycol Myristate  
 Propylene Glycol Myristyl Ether  
 Propylene Glycol Myristyl Ether Acetate  
 Propylene Glycol Oleate  
 Propylene Glycol Ricinoleate  
 Propylene Glycol Soyate  
 Propylene Glycol Stearate  
 Silica Silylate  
 Soybean Oil Unsaponifiables  
 Soy Sterol  
 Soy Sterol Acetate  
 Squalene  
 Stearoxytrimethylsilane  
 Stearyl Acetate  
 Stearyl Alcohol  
 Stearyl Citrate  
 Stearyl Lactate  
 Sucrose Distearate  
 Sulfurized Jojoba Oil  
 Sunflower Seed Oil Glycerides  
 Tall Oil Glycerides  
 Tallow Glyceride  
 Tallow Glycerides  
 Tridecyl Alcohol  
 Trisocetyl Citrate  
 Trisostearin PEG-6 Esters  
 Trimethylsilylamodimethicone  
 Triolein PEG-6 Esters  
 Tris(Tributoxysiloxy)Methylsilane  
 Undecylpentadecanol  
 Vegetable Glycerides Phosphate  
 Wheat Germ Glycerides

## SKIN CONDITIONING AGENTS – HUMECTANT

Skin conditioning agents - humectant are cosmetic ingredients intended to increase the water content of the top layers of skin. This group of ingredients includes primarily hygroscopic agents employed for this specific purpose. A similar function is attributed to *skin conditioning agents - emollient*; *skin conditioning agents - miscellaneous*; and *skin conditioning agents - occlusive*.

Amide MEA  
 Lactose

Glucamine  
 Glucose

Glucose Glutamate  
 Glucuronic Acid



**SKIN CONDITIONING AGENTS – HUMECTANT (Cont.)****SKIN CONDITIONING AGENTS – MISCELLANEOUS**

Glutamic Acid  
Glycereth-7  
Glycereth-12  
Glycereth-26  
Glycerin  
Histidine  
Honey  
Hydrogenated Honey  
Hydrogenated Starch Hydrolysate  
Lactose

Maltitol  
Mannitol  
Methyl Gluceth-10  
Methyl Gluceth-20  
PCA  
PEG-10 Propylene Glycol  
Polyamino Sugar Condensate  
Propylene Glycol  
Pyridoxine Dilaurylate  
Saccharide Hydrolysate

Saccharide Isomerase  
Sodium Lactate  
Sodium PCA  
Sorbitol  
Sucrose  
TEA-Lactate  
TEA-PCA  
Urea  
Xylitol

**SKIN CONDITIONING AGENTS – MISCELLANEOUS**

Skin conditioning agents - miscellaneous are cosmetic ingredients used to create special effects on skin. This group includes substances which enhance the appearance of dry skin and substantive materials which adhere to the skin to reduce flaking. A similar effect is attributed to *skin conditioning agents - emollient; skin conditioning agents - humectant; and skin conditioning agents - occlusive.*

Adenosine Phosphate  
Adenosine Triphosphate  
Alanine  
Albumen  
Aldioxa  
Allantoin  
Allantoin Ascorbate  
Allantoin Biotin  
Allantoin Calcium Pantothenate  
Allantoin Galacturonic Acid  
Allantoin Glycyrhethinic Acid  
Allantoin Polygalacturonic Acid  
Aloe  
Animal Collagen Amino Acids  
Animal Elastin Amino Acids  
Animal Keratin Amino Acids  
Arginine  
Asparagine  
Aspartic Acid  
C10-11 Isoparaffin  
C10-13 Isoparaffin  
C11-12 Isoparaffin  
C11-13 Isoparaffin  
C12-14 Isoparaffin  
Camphor  
Caprylyl/Capryl Glucoside  
Casein  
Cetyl Betaine  
Chlorodeceth-14  
Cholesterol  
Cocamidoethyl Betaine  
Cocamidopropyl Betaine  
Cocamidopropyl Hydroxysultaine  
Cocamidopropyl Lauryl Ether  
Coco-Betaine  
Coco/Oleamidopropyl Betaine  
Coco-Sultaine  
Cod Liver Oil  
Cysteine  
Cysteine HCl  
Cystine  
Decyl Betaine

Desamido Animal Collagen  
Dicapryloyl Cystine  
Diethyl Aspartate  
Diethylene Tricaseinamide  
Diethyl Glutamate  
Dihydrocholesterol  
Dipalmitoyl Hydroxyproline  
Disodium Adenosine Triphosphate  
Dried Buttermilk  
Dried Egg Yolk  
Egg  
Egg Oil  
Egg Yolk  
Egg Yolk Extract  
Ethyl Aspartate  
Ethyl Ester of Hydrolyzed Animal Protein  
Ethyl Glutamate  
Ethyl Serinate  
Ethyl Urocanate  
Folic Acid  
Fructose  
Glutamic Acid  
Glutamine  
Glyceryl Lanolate  
Glycine  
Glycogen  
Guanosine  
Hexamethyldisiloxane  
Hexyl Nicotinate  
Histidine  
Human Placental Protein  
Hyaluronic Acid  
Hydrogenated Animal Glyceride  
Hydrogenated Honey  
Hydrogenated Palm Oil  
Hydrogenated Tallow Betaine  
Hydrogenated Tallowtrimonium Chloride  
Hydrogenated Laneth-5  
Hydrolyzed Animal Elastin  
Hydrolyzed Animal Keratin  
Hydrolyzed Animal Protein  
Hydrolyzed Casein

Hydrolyzed Human Placental Protein  
Hydrolyzed Mucopolysaccharides  
Hydrolyzed Silk  
Hydrolyzed Soy Protein  
Hydrolyzed Vegetable Protein  
Hydrolyzed Yeast Protein  
Hydroxylated Lanolin  
Hydroxyproline  
Isobutylated Lanolin Oil  
Isoleucine  
Isostearamidopropyl Betaine  
Isostearyl Diglycerol Succinate  
Keratin  
Laneth-4 Phosphate  
Laneth-5  
Lanolinamide DEA  
Lanosterol  
Lard Glycerides  
Lauramidopropyl Betaine  
Lauryl Aminopropylglycine  
Lauryl Betaine  
Lauryl Diethylenediaminoglycine  
Lauryl Sultaine  
Lecithin  
Leucine  
Linoleic Acid  
Linolenic Acid  
Lysine  
Magnesium Aspartate  
Magnesium Lanolate  
Magnesium Sulfate  
MEA-Hydrolyzed Animal Protein  
Methionine  
2-Methyl-4-Hydroxypyrrolidine  
Milk  
Mixed isopropanolamines Lanolate  
Mixed Mucopolysaccharides  
Monosaccharide Lactate Condensate  
Myristamidopropyl Betaine  
Myristyl Betaine  
Niacinamide  
Nonfat Dry Milk

## SKIN CONDITIONING AGENTS - MISCELLANEOUS (Cont.)

## SKIN CONDITIONING AGENTS - OCCLUSIVE

Norvaline  
 Oleamidopropyl Betaine  
 Oleamidopropyl Hydroxysultaine  
 Oleyl Betaine  
 Protic Acid  
 Palamidopropyl Betaine  
 Palmitamidopropyl Betaine  
 Palmitamidopropyl Dimethylamine  
 Palmitoyl Animal Collagen Amino Acids  
 PEG-5 Hydrogenated Lanolin  
 PEG-10 Hydrogenated Lanolin  
 PEG-2 Milk Solids  
 PEG-6 Soya Sterol Undecylenate  
 Phenylalanine  
 Polyglyceryl-2 Lanolin Alcohol Ether  
 Potassium Aspartate  
 Potassium Caseinate  
 Potassium DNA  
 PPG-9  
 PPG-12  
 PPG-15  
 PPG-17  
 PPG-20  
 PPG-26  
 PPG-30  
 PPG-34  
 PPG-2-Buteth-3  
 PPG-3-Buteth-5  
 PPG-5-Buteth-7  
 PPG-7-Buteth-10  
 PPG-9-Buteth-12  
 PPG-12-Buteth-16  
 PPG-15-Buteth-20  
 PPG-20-Buteth-30  
 PPG-24-Buteth-27  
 PPG-26-Buteth-26  
 PPG-28-Buteth-35  
 PPG-33-Buteth-45  
 PPG-4 Butyl Ether  
 PPG-5 Butyl Ether  
 PPG-9 Butyl Ether  
 PPG-14 Butyl Ether  
 PPG-15 Butyl Ether

PPG-16 Butyl Ether  
 PPG-18 Butyl Ether  
 PPG-22 Butyl Ether  
 PPG-24 Butyl Ether  
 PPG-30 Butyl Ether  
 PPG-33 Butyl Ether  
 PPG-40 Butyl Ether  
 PPG-53 Butyl Ether  
 PPG-2 Isostearate  
 PPG-10 Methyl Glucose Ether  
 PPG-20 Methyl Glucose Ether  
 PPG-20 Methyl Glucose Ether Acetate  
 PPG-2 Myristyl Ether Propionate  
 Pregnenolone Acetate  
 Proline  
 Pyridoxine  
 Pyridoxine Dicaprylate  
 Pyridoxine Dilaureate  
 Pyridoxine Dioctenoate  
 Pyridoxine Dipalmitate  
 Pyridoxine HCl  
 Pyridoxine Tripalmitate  
 Resorcinol Acetate  
 Retinol  
 Retinyl Acetate  
 Retinyl Palmitate  
 Ribonucleic Acid  
 Ricinoleamidopropyl Betaine  
 Salicylic Acid  
 Serine  
 Serum Albumin  
 Serum Proteins  
 Silk  
 Silk Amino Acids  
 Silk Powder  
 Sodium Caseinate  
 Sodium Chondroitin Sulfate  
 Sodium DNA  
 Sodium Gluconate  
 Sodium Glutamate  
 Sodium Hyaluronate  
 Sodium Lactate Methylsilanol

Sodium Laneth Sulfate  
 Sodium Mannuronate Methylsilanol  
 Sodium PCA Methylsilanol  
 Sodium Riboflavin Phosphate  
 Sodium Urocanate  
 Soluble Animal Collagen  
 Sorbitol  
 Soyaethyl Morpholinium Ethosulfate  
 Soy Protein  
 Stearamidoethyl Diethylamine  
 Stearamidoethyl Diethylamine Phosphate  
 Stearamidopropyl Betaine  
 Stearamidopropyl Dimethylamine  
 Stearyl Betaine  
 Sulfur  
 Sulfurized Jojoba Oil  
 Tall Oil Sterol  
 Tallowamidopropyl Betaine  
 Tallowamidopropyl Hydroxysultaine  
 Thiamine HCl  
 Thiamine Nitrate  
 Threonine  
 Tocopheryl Acetate  
 Tocopheryl Linoleate  
 Tocopheryl Nicotinate  
 Tocopheryl Succinate  
 Tridecyl Salicylate  
 Tridecyl Stearate  
 Tryptophan  
 Tyrosine  
 Undecylenyl Alcohol  
 Undecylpentadecanol  
 Uric Acid  
 Urocanic Acid  
 Vegetable Oil  
 Wheat Germamidopropyl Betaine  
 Wheat Germamidopropyl Dimethylamine Lactate  
 Whey Protein  
 Whole Dry Milk  
 Witch Hazel Distillate  
 Witch Hazel Extract

## SKIN CONDITIONING AGENTS - OCCLUSIVE

Skin conditioning agents - occlusive are cosmetic ingredients which retard the evaporation of water from the skin surface. By blocking the evaporative loss of water, occlusive materials increase the water content of skin. Occlusive agents are generally lipids which tend to remain on the skin surface. Occlusivity is frequently attributed to *skin conditioning agents - emollient*. *Skin conditioning agents - humectant* and *skin conditioning agents - miscellaneous* sometimes exhibit occlusive properties upon application to the skin.

Acetylated Castor Oil  
 Acetylated Glycol Stearate  
 Acetylated Hydrogenated Cottonseed Glyceride  
 Acetylated Hydrogenated Lard Glyceride  
 Acetylated Hydrogenated Tallow Glyceride  
 Acetylated Hydrogenated Tallow Glycerides  
 Acetylated Hydrogenated Vegetable Glyceride

Acetylated Lanolin  
 Acetylated Lanolin Alcohol  
 Acetylated Lanolin Ricinoleate  
 Acetylated Lard Glyceride  
 Acetylated Palm Kernel Glycerides  
 Acetylated Sucrose Distearate  
 Aluminum Isostearates/Laurates/Palmitates  
 Aluminum Isostearates/Laurates/Stearates

Aluminum Isostearates/Myristates  
 Aluminum Isostearates/Palmitates  
 Aluminum Isostearates/Stearates  
 Aluminum Lanolate  
 Aluminum Myristates/Palmitates  
 Aluminum Stearate  
 Aluminum Stearates  
 Aluminum Tristearate

**SKIN CONDITIONING AGENTS – OCCLUSIVE (Cont.)****SKIN PROTECTANTS**

Apricot Kernel Oil	Hydrogenated Rice Bran Wax	Propylene Glycol Diundecanoate
Avocado Oil	Hydrogenated Shark Liver Oil	Rapeseed Oil
Avocado Oil Unsaponifiables	Hydrogenated Soybean Oil	Rapeseed Oil Unsaponifiables
Batyl Alcohol	Hydrogenated Tallow	Rice Bran Oil
Batyl Isostearate	Hydrogenated Vegetable Oil	Rice Bran Wax
Batyl Stearate	Isobutylated Lanolin Oil	Safflower Oil
Bayberry Wax	Isostearyl Erucate	Sesame Oil
Bisphenylhexamethicone	Isostearyl Stearoyl Stearate	Shark Liver Oil
Butter	Jojoba Butter	Shea Butter
C18-36 Acid Triglyceride	Jojoba Oil	Shea Butter Unsaponifiables
C30-46 Piscine Oil	Jojoba Wax	Shellac Wax
C10-18 Triglycerides	Lanolin Linoleate	Soybean Oil
Caprylic/Capric/Isostearic/Adipic Triglycerides	Lanolin Ricinoleate	Soybean Oil Unsaponifiables
Caprylic/Capric/Lauric Triglyceride	Lard	Soy Sterol Acetate
Caprylic/Capric/Linoleic Triglyceride	Lauryl Stearate	Squalane
Caprylic/Capric/Stearic Triglyceride	Linseed Oil	Stearoxy Dimethicone
Caprylic/Capric Triglyceride	Menhaden Oil	Stearyl Caprylate
Castor Oil	Methicone	Stearyl Caprylate/Caprates
Chaulmoogra Oil	Mineral Oil	Stearyl Erucate
Cherry Pit Oil	Mink Oil	Stearyl Heptanoate
Cocoa Butter	Mink Wax	Stearyl Octanoate
Coconut Oil	Moringa Oil	Stearyl Stearate
Cod Liver Oil	Neatsfoot Oil	Stearyl Stearoyl Stearate
Corn Oil	Octyldodecyl Myristate	Sunflower Seed Oil
Cottonseed Oil	Octyldodecyl Stearate	Sweet Almond Oil
Dihydrogenated Tallow Phthalate	Octyldodecyl Stearoyl Stearate	Synthetic Jojoba Oil
Diisostearyl Diinoleate	Oleostearine	Synthetic Wax
Diinoleic Acid	Oleyl Lanolate	Tall Oil
Dimethicone	Oleyl Linoleate	Tallow
Dioctyl Diinoleate	Olive Husk Oil	Tallow Glycerides
Ditridecyl Diinoleate	Olive Oil	Tricaprin
Egg Oil	Olive Oil Unsaponifiables	Trihydroxystearin
Erucyl Arachidate	Palm Kernel Oil	Trisononanol
Erucyl Erucate	Palm Oil	Trisopropyl Trilinoleate
Ethiodized Oil	Paraffin	Trisostearin
Glyceryl Tribehenate	Peach Kernel Oil	Trisostearyl Trilinoleate
Glycol Dibehenate	Peanut Oil	Triaurin
Grape Seed Oil	Pengawar Djambi Oil	Triauryl Citrate
Hazel Nut Oil	Pentadesma Butter	Trilinoleic Acid
Hexadecyl Methicone	Pentaerythrityl Hydrogenated Rosinate	Trilinolein
Hexanediol Distearate	Pentaerythrityl Tetraabietate	Trimethylolpropane Trisostearate
Hybrid Safflower Oil	Pentaerythrityl Tetrabehenate	Trimethylolpropane Trioctanoate
Hydrogenated C6-14 Olefin Polymers	Pentaerythrityl Tetrastearate	Trimethylsiloxysilicate
Hydrogenated Castor Oil	Pentahydrosqualene	Trimyristin
Hydrogenated Coconut Oil	Petrolatum	Trioctyl Citrate
Hydrogenated Cottonseed Oil	Phenyl Trimethicone	Triolein
Hydrogenated Jojoba Oil	Pristane	Trioleyl Phosphate
Hydrogenated Jojoba Wax	Propylene Glycol Dicaprylate	Tripalmitin
Hydrogenated Lanolin	Propylene Glycol Dicaprylate/Dicaprate	Tristearin
Hydrogenated Lard	Propylene Glycol Dicocotate	Tristearyl Citrate
Hydrogenated Menhaden Oil	Propylene Glycol Dilaureate	Vegetable Oil
Hydrogenated Palm Kernel Oil	Propylene Glycol Dioctanoate	Walnut Oil
Hydrogenated Palm Oil	Propylene Glycol Dipelargonate	Wheat Bran Lipids
Hydrogenated Peanut Oil	Propylene Glycol Distearate	Wheat Germ Oil

**SKIN PROTECTANTS**

Skin protectants are the active ingredients used in over-the-counter (OTC) skin protectant drug products. In a proposed rule published by the U.S. Food and Drug Administration, "Skin Protectant Drug Products for Over-the-Counter Human Use" (48 Fed. Reg. 6820, February 15, 1983), a skin protectant is defined as "a drug which protects injured or exposed skin or mucous membrane surface from harmful or annoying stimuli."

# **EXHIBIT I**

**REDACTED**